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AF/3714



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

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| APPELLANTS: | Thomas Birkhoelzer et al. | GROUP ART UNIT: 3714 |
| SERIAL NO.: | 09/994,309 | EXAMINER: John Sotomayor |
| FILED: | November 26, 2001 | CONFIRMATION NO.: 8682 |
| TITLE: | **"APPARATUS AND METHOD FOR DETERMINING AN INDIVIDUALLY ADAPTED, NON-PREFABRICATED TRAINING UNIT"** | |

**MAIL STOP APPEAL BRIEF-PATENTS**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450



## APPELLANTS' MAIN BRIEF ON APPEAL

S I R:

In accordance with the provisions of 37 C.F.R. §1.192(a), Appellants herewith submit their main brief in support of the appeal of the above-referenced application.

## REAL PARTY IN INTEREST:

The real party in interest is the assignee of the present application, Siemens Aktiengesellschaft, a German corporation.

## RELATED APPEALS AND INTERFERENCES:

There are no related appeals and no related interferences.

## STATUS OF CLAIMS:

Claims 1-6 are on appeal, and constitute all pending claims of the application. No claim was added or canceled during prosecution.

## STATUS OF AMENDMENTS:

A response to the final rejection dated August 20, 2003 was filed on January 22, 2004, but no amendments to the claims were made in that response. In an

Advisory Action dated February 4, 2004, the Examiner stated the response had been considered, but did not place the application in condition for allowance.

**SUMMARY OF THE INVENTION:**

The invention set forth in the claims on appeal is directed to an apparatus and to a method for determining a training unit based on the learning need of a trainee, of the type having an input device, a data bank of all training modules and a selection device.

The figure shows a system that has an input device 1, for example a personal computer (PC), that is connected to a selection device 2. (p. 5, l. 6-7) A data bank 3 in which training modules 4 and their dependencies 5 to other and/or subordinated training modules 6 are stored is connected to the selection device 2. (p. 5, l. 7-9) On the basis of inputs with the input device 1, the selection device 2 selects the training unit required for the training participant from these training modules 4 and 6. (p. 5, l. 9-11) The required training unit is stored, for example, in a buffer memory 7 and can be fetched by the training participant at any time and shown on a output device and/or training device 8. (p. 5, l. 11-13) The output device 8 can be the same PC as the input device 1. (p. 5, l. 13-14)

On the basis of the inputs at the input device 1, the selection device 2 determines those training modules from the entirety of training modules 4 that meet the learning objective of the training participant. (p. 5, l. 15-17) The dependencies of the training modules 5 on one another are also taken into consideration, i.e. when a training module 4 that, for example, builds on a training module 6 is selected, co-offered to the training participant. (p. 5, l. 17-20)

In the environment of medical imaging, for example, this means that a physician specifies his or her learning need as "3D evaluation for a medical software platform without extensive prior knowledge". (p. 5, l. 21-23)

In response thereto, the physician is offered the following training modules as courses that cover this request overall, whereby the request, the physician's background knowledge and the selected topics are taken into consideration:

a) Introduction into the user paradigms of the software platform;

b) Introduction into filming for documentation;

c) Introduction into 3D technology,

d) Advanced 3D technology; and

e) 3D diagnostics. (p. 6, l. 1-8)

The training modules a) through c) are derived from the basic program for MRTA, the training module d) is derived from the course program for expert users, and the training module e) is derived from a program for continuing medical education. (p. 6, l. 9-11)

Dependent on learning need, thus, a training unit 7 is compiled that is composed of directly required training modules 4. (p. 6, l. 12-13) Further, training modules 6 are likewise allocated thereto that are linked with the training modules 4 via dependencies 5. (p. 6, l. 13-14) These are derived from the existing background knowledge of the physician. (p. 6, l. 14-15)

**ISSUES:**

The issues on appeal are as follows:

Whether the subject matter of claims 1-4 is anticipated under 35 U.S.C. §102(e), by United States Patent No. 6,427,063 (Cook et al);

Whether the subject matter of claim 5 would have been obvious to a person of ordinary skill in the field of training system design under 35 U.S.C. §103(a) based on the teachings of Cook et al in view of the teachings of United States Patent No. 6,301,571 (Tatsuoka); and

Whether the subject matter of claim 6 is anticipated under 35 U.S.C. §102(e) by United States Patent No. 6,371,765 (Wall et al).

**GROUPING OF CLAIMS:**

The patentability of claims 1-6 stands or falls together.

**ARGUMENT:**

An important feature of the apparatus of independent claim 1 and the method of independent claim 6 is that a customized training unit is generated by combining or linking a number of stored training modules. In claim 1, it is explicitly stated that the training modules have dependencies on each other, which are also stored in the data bank, and these dependencies are taken into account in the selection device for generating the training unit by combining a number of the training modules. In independent claim 6, as amended, step (d) explicitly states that the training unit is customized from multiple training modules identified in steps (b) and (c), and each of those steps refers to the term "modules" in the plural.

Therefore, in the apparatus and method of the claims on appeal, it is not simply a matter of storing a number of training modules and then selecting one of those modules as being most appropriate for a particular trainee, but instead more than one of the stored training modules are combined or linked, based on their stored dependencies with each other, to form a training unit that is customized for the particular trainee.

The Cook et al. reference does teach creating a customized training program configuration for a particular trainee or student, however, it is not composed of a number of previously stored training modules. The type of presentation or configuration which is compiled in the Cook et al. reference is itself a training module comparable to the type of training module which can be stored in the data bank, for linking with other stored modules, in the apparatus and method of the present invention. In the Cook et al. reference, the creation of such a training module is the end result. In the apparatus and method of the invention, a plurality of such training modules are predetermined and stored, and a training unit is then generated by combining or linking appropriate ones among the stored training modules, so that the training unit is customized according to the needs of the trainee.

The Examiner cited column 5, lines 54-65 of the Cook et al. reference, which the Examiner stated provides a teaching that new training modules can be composed from previously stored data, including whole, pre-formed and animated sequences that may be compiled to form a new, customized training module. While this is a true statement of the teachings of Cook et al., this does not provide a teaching comparable to the element of apparatus claim 1, of a selection device that generates a training unit by combining a number of *said training modules*. In the subject matter disclosed and claimed in the present application, a number of *training modules* are stored. The term "training module" is intended to have its ordinary dictionary meaning, and represents a compilation of information that achieves its intended purpose, i.e., training someone to perform a particular task.

By contrast, the data that are stored in the Cook et al. reference, and which can be selectively combined to form a training module, are not themselves training

modules, but are only "dynamic clip art" stored in the form of data strips, as explicitly set forth at column 5, lines 56-57 of the Cook et al. reference. These items of clip art are explicitly stated earlier in the same passage to be created by "artists, animators, singers and so forth." Clearly these "artists, animators, singers and so forth" do not themselves have any capability or information which qualifies them to train another person to perform some type of task. These contributors or creators of the "clip art" merely provide "sound, voice, graphics, animation or video, or combinations of these," as explicitly stated at column 5, lines 61-63. Moreover, by their very nature, none of these "clip art" items have any useful dependency relative to each other, nor is there any teaching that such dependencies are stored. The user merely selects from this library of clip art a number of clip art items which the user believes would be appropriate for generating a training module. This is not the same as first storing a number of training modules, together with information identifying the dependencies of these training modules on each other, and then combining a number of these stored training modules to generate a new training unit. The most that can be said of the Cook et al. reference is that it teaches assembling a number of "clip art" items to form a training module, but once this training module is formed, there is no teaching whatsoever in the Cook et al. reference that such a training module should be stored, together with dependencies on other training modules, for selective combination to form a larger training unit. The end result of the procedure or technique disclosed in the Cook et al. reference is a training module itself, and there is no teaching in the Cook et al. reference to generate a larger training unit from multiple training modules, dependent on the stored, respective dependencies of

different training modules on each other, as set forth in claim 1 of the present application.

The individual components which are used to compile the training module or training program in accordance with the teachings of Cook et al., in the passages cited by the Examiner in the Office Action, are not individually capable of providing any training at all. They are simply various types of audio and visual display objects. By themselves (i.e., individually) they are incapable of conveying training information, it is only when they are combined in the manner taught by Cook et al. that a training module or training program is created. Therefore, even if the individual components are stored in the Cook et al., this is not comparable to storing multiple *training modules*; it is merely a teaching to store components that can be combined to form a single training module or program.

As noted above, the Cook et al. reference proceeds based on a completely different manner of thinking from that disclosed and claimed in the present application. The Cook et al. reference treats the training program or training module produced in the manner discussed above as being an end result. Even if it is modified according to future interaction with the trainee, it is not modified by combining or linking it with other training modules; it is merely modified by adding, subtracting or adjusting one or more of the individual components thereof, which are not themselves training modules.

By contrast, the present Applicants have recognized that if multiple training modules of the type described in the Cook et al. reference are created for a number of different students or trainees, it is beneficial to store all of these individual training modules (or training modules created in some other manner), and to identify

dependencies of these modules on each other and to store the dependencies as well. When it is desired to create a new training unit, all of these previously created training modules are then available for combining with each other, according to the aforementioned dependencies.

Equally as importantly, as noted above, claim 1 requires not only that the training modules be stored, but that they be stored together with dependencies on each other. Even if the position of the Examiner is accepted, that the aforementioned items of "clip art" constitute training modules, there is no teaching or statement in the Cook et al reference that these items of "clip art" are stored with any sort of dependency on each other. According to the disclosure of Cook et al, these are simply "stand alone" items and it is completely up to the user to select these items and to combine them in a particular way to create a training module. It is true that the training module, once created in this manner, can then be modified or updated, but this has nothing whatsoever to do with the initial selection and combination of the "clip art" items.

Therefore, the Cook et al. reference does not disclose all of the elements of independent claims 1 or 6 as arranged and operating in those claims, and therefore does not anticipate either of those independent claims, nor any of claims 2-4 depending from claim 1.

With regard to claim 5, the Examiner acknowledged that the Cook et al. reference does not specifically disclose a data bank containing a plurality of medical education training modules. The Examiner stated that the Tatsuoka reference teaches that an important aspect of building a combination of modules for training is the diagnosis of training participants with respect to their need for treatment of

medical conditions. Applicants acknowledge that the Tatsuoka reference teaches undertaking a continually updated diagnosis of participants in training programs for treating medical conditions, however, Applicants do not find any teaching in the Tatsuoka reference to generate a training program or a training unit from multiple training modules, and therefore Applicants do not agree that the Tatsuoka reference teaches this feature as being "an important aspect of building a combination of modules for training" as characterized by the Examiner. Given the absence of a teaching in the Cook et al. reference, for the reasons discussed above, to combine or link multiple training modules to produce a training unit, even if the Cook et al. system were modified in accordance with teachings of Tatsuoka, an apparatus as set forth in claim 5, which embodies the subject matter of claim 1 therein, still would not result. Claim 5, therefore, would not have been obvious to a person of ordinary skill in the art under the provisions of 35 U.S.C. §103(a) based on the teachings of Cook et al. and Tatsuoka.

Claim 6 stands rejected under 35 U.S.C. §102(e) as being anticipated by Wall et al.

The Wall et al. reference teaches storing "a plurality of self-containing multimedia lesson plans, on-line help screens, trouble shooting modules, test/quiz portions, appropriate technology background information, glossaries, etc." (Wall et al., column 5, lines 15-19). The Wall et al. reference, however, represents the problem in the art which the present invention of claim 6 is intended to overcome, namely that the user is presented with the daunting task of having to make selections from (potentially) *every one* of these stored items. This is made clear in the passage at column 4, lines 42-58 of the Wall et al. reference, wherein it is stated

that the intention of the system disclosed in the Wall et al. reference is "for facilitating maximum user flexibility," and "the end-user is capable of selecting *any lesson plan* as well as executing *only a portion of a training session* at any point in the course where depending upon the need." The user, therefore, must select which lesson plan is desired, and/or must designate which portion of a training session, is/are to be used. There is no disclosure or teaching in the Wall et al. reference of a training method for *automatically* determining and meeting the needs of training participants. The Wall et al. system makes a large number of selections available to an end user, but it is up to the end user to ultimately make the selection. Moreover, there is no teaching in the Wall et al. reference to determine all training modules that are responsive to a user's entry. The Wall et al. system, at least initially, assumes that every training session stored therein is possibly responsive to the user's entry, and it is up to the user to cull from among the available, stored sessions to customize a particular training program.

Additionally, claim 6 requires that an entry be made that includes, among other things, background knowledge of a training participant, and the computerized system then makes a selection that is dependent on the aforementioned background knowledge, and defines a training unit that is customized to the training participant from these multiple training modules.

There is no such automatic culling and combining procedure disclosed or suggested in the Wall et al. reference. As noted above, it is up to the user to ultimately select all items to be included in the training session, even though the user may be assisted in this procedure by a number of prompts.

The Wall et al. reference, therefore, does not disclose all of the method steps of claim 6, and in fact the underlying intent of the system disclosed in the Wall et al. (to provide maximum user flexibility) is counter to the automatic procedure that is set forth in claim 6. Claim 6, therefore, is not anticipated by the Wall et al. reference under the provisions of 35 U.S.C. §102(e).

**CONCLUSION:**

For the foregoing reasons, Appellants respectfully submit the Examiner is in error in law and in fact in rejecting claims 1-6 for the above reasons. Reversal of the rejections of claims 1-6 is therefore justified, and the same is respectfully requested.

This Appeal Brief is accompanied by a check for the requisite fee in the amount of $330.00.

Submitted by,

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**CERTIFICATE OF MAILING**

I hereby certify that an original and two copies of this correspondence are being deposited with the United States Postal Service as First Class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on April 12, 2004.

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**APPENDIX "A"**

1. An apparatus for automatically determining an individually adapted, non-prefabricated training unit, comprising:

an input device adapted to receive an entry from a training participant;

a data bank in which a plurality of training modules are stored, said training modules having dependencies on each other and said dependencies also being stored in said data bank; and

a selection device connected to said input device and to said data bank for, in response to, and dependent on, said entry, generating a training unit by combining a number of said training modules taking said dependencies of said training modules on each other into consideration.

2. An apparatus as claimed in claim 1 wherein each of said training modules has a content with an expert knowledge level associated therewith, and wherein said selection unit generates said training unit from training modules respectively having uniform levels of expert knowledge associated therewith.

3. An apparatus as claimed in claim 1 wherein each of said modules has a content, and wherein the content of some of said modules is a prerequisite for the content of other modules, and wherein said selection device takes said prerequisite contents into consideration in generating said training unit.

4. An apparatus as claimed in claim 1 wherein said input device allows entry of key words as part of said entry, and wherein said key words are stored in said data bank, and wherein said selection device generates said training unit based on said key words.

5. An apparatus as claimed in claim 1 wherein said data bank is a data bank containing a plurality of medical education training modules as said training modules.

6. A method for automatically determining learning needs of a training participant and defining a customized training unit for said trainee, comprising the steps of:

(a) entering, into a computerized system, an entry characterizing learning needs of a training participant selected from the group consisting of learning objectives of a training participant, background knowledge of a training participant, and a requested topic as characteristics of the learning needs of the training participant;

(b) from among a plurality of training modules stored in said computerized system, determining all training modules responsive to said entry;

(c) from among said training modules responsive to said entry, identifying selected training modules, dependent on said background knowledge; and

(d) defining a training unit customized to said training participant from multiple training modules identified in steps (b) and (c).